

IN THE CLAIMS

1. (currently amended) An apparatus for use during arthroplasty for guiding the resection of a bone having a long axis, comprising:

an anchoring pin means for anchoring the apparatus to the bone, said anchoring pin means oriented transversely to the long axis of the bone;

a first cam lock having a rod member at a first end and a split bore at a second end for slidably and rotationally receiving the pin, a diameter of the split bore being reduced by actuation of a first cam lever forming part of the first cam lock;

a split tubular member having a bore, a second cam lock located at a first end of the split tubular member, the rod member slidably and rotationally received within the bore at a first end of the split tubular member, a diameter of the split tubular member bore reduced by the actuation of a second cam lever forming part of the second cam lock;

a guide for guiding a tool into contact with the bone having a rod extending from the guide, the rod slidably and rotationally received within a bore at a second end of the split tubular member; and

a third cam lock located at the second end of the split tubular member, a diameter of the split tubular member bore at the second end reduced by the actuation of a third cam lever forming part of the third cam lock,

~~a guide coupled to said anchoring means; and~~

~~alignment means coupled to said anchoring means and said guide for locating said guide relative to the anchoring means, said apparatus alignment means providing three degrees of freedom, wherein said three degrees of freedom include two rotations and one translation.~~

2. (previously presented) The apparatus according to claim 1 wherein said alignment means is continuously adjustable.

Claim 3 (cancelled)

4. (previously presented) The apparatus according to claim 1 wherein said alignment means provides five degrees of freedom.

Claim 5 (cancelled)

6. (previously presented) The apparatus according to claim 1 wherein said three degrees of freedom include flexion-extension, varus-valgus, and proximal-distal.

7. (previously presented) The apparatus according to claim 4 wherein said five degrees of freedom include flexion-extension, varus-valgus, proximal-distal, medial-lateral, and anterior-posterior.

8. (previously presented) The apparatus according to claim 1 wherein said guide includes means for attaching a computer navigation tracker.

9. (previously presented) The apparatus according to claim 1 wherein said guide includes a pair of arms having guide holes adapted to guide drilling into the epicondylar region of a femur.

10. (previously presented) The apparatus according to claim 9 wherein said guide includes a T-shaped component and said arms are adapted to be coupled to said T-shaped component.

Claims 11-13 (cancelled)

14. (previously presented) The apparatus according to claim 1 wherein said guide is adapted to guide the drilling of two holes in the distal femur.

Claims 15-30 (cancelled)

31. (withdrawn) An apparatus for use during arthroplasty for guiding the resection of a bone having a long axis, comprising:

anchoring means for anchoring the apparatus to the bone, said anchoring means oriented transversely to the long axis of the bone;

a guide coupled to said anchoring means;

alignment means for locating the guide relative to the anchoring means, said alignment means providing three degrees of freedom wherein said three degrees of freedom include two rotations and one translation; and

a computer navigation system optically coupled to the guide.

32. (withdrawn) The apparatus according to claim 31 wherein said three degrees of freedom are infinitely variable.

33. (withdrawn) The apparatus according to claim 31 wherein said alignment means provides five degrees of freedom.

34. (withdrawn) The apparatus according to claim 33 wherein said five degrees of freedom include flexion-extension, varus-valgus, proximal-distal, medial-lateral, and anterior-posterior.

35. (withdrawn) The apparatus according to claim 31 wherein said anchoring means is a pin.

36. (withdrawn) The apparatus according to claim 31 wherein said three degrees of freedom include flexion-extension, varus-valgus, and proximal-distal.

Claim 37 (cancelled)

38. (withdrawn) The apparatus according to claim 31 wherein said computer navigation system further comprises a tracker and said guide includes means for attaching said tracker.

Claims 39-41 (cancelled)

42. (withdrawn) The apparatus according to claim 31 further comprising a guide bushing defining two spaced apart guide holes, said guide bushing having an orthogonal stem for coupling to an alignment device and a coupling for coupling a tracker to the bushing.

43. (currently amended) A set of tools for guiding the resection of a bone during arthroplasty, said set of tools comprising:

a guide bushing defining two spaced apart guide holes, said guide bushing having an orthogonal stem for coupling to an alignment device and a coupling for coupling a tracker to the bushing;~~and~~

an alignment device having at least three degrees of freedom wherein two are rotational and one is translational, said alignment device being adapted to couple to said stem and couple to an anchoring device;

the alignment device comprising:

a first cam lock having a rod member at a first end and a split bore at a second end for slidably and rotationally receiving the anchoring device coupled to a bone, a diameter of the split bore being reduced by actuation of a first cam lever forming part of the first cam lock;

a split tubular member having a bore, a second cam lock located at a first end of the split tubular member, the rod member slidably and rotationally received within the bore at a first end of the split tubular member, a diameter of the split tubular member bore reduced by the actuation of a second cam lever forming part of the second cam lock;

the guide bushing orthogonal stem slidably and rotationally received within a bore at a second end of the split tubular member; and

a third cam lock located at the second end of the split tubular member, a diameter of the split tubular member bore at the second end reduced by the actuation of a third cam lever forming part of the third cam lock.

44. (previously presented) The set of tools according to claim 43 wherein said guide is adapted to guide the drilling of holes in the distal femur.

45. (previously presented) The set of tools according to claim 43 wherein said alignment device has five degrees of freedom.

46. (previously presented) The set of tools according to claim 43 wherein said guide bushing includes a medial guide bushing and a lateral guide bushing, said medial guide bushing defining two spaced apart holes for drilling into the medial epicondylar region, and said lateral guide bushing defining two

spaced apart holes for drilling into the lateral epicondylar region.

47. (previously presented) The apparatus of claim 1 wherein said anchoring means is oriented substantially parallel to the sagittal plane.

48. (withdrawn) The method of claim 17 wherein the orientation of the anchor is substantially parallel to the sagittal plane.

49. (withdrawn) The apparatus of claim 31 wherein said anchoring means is oriented substantially parallel to the sagittal plane.

50. (previously presented) The apparatus according to claim 1 further comprising a guide bushing defining two spaced apart guide holes, said guide bushing having an orthogonal stem for coupling to an alignment device and a coupling for coupling a tracker to the bushing.

Claims 51-61 (cancelled)

62. (withdrawn) An apparatus for use during arthroplasty for guiding the resection of a bone having a long axis, comprising:

anchoring means for anchoring the apparatus to the bone, said anchoring means oriented transversely to the long axis of the bone;

a guide coupled to said anchoring means;

alignment means for locating the guide relative to the anchoring means, said alignment means providing five degrees of freedom; and

a computer navigation system optically coupled to the guide.

63. (withdrawn) The apparatus according to claim 62 wherein said five degrees of freedom are infinitely variable.

64. (withdrawn) The apparatus according to claim 62 wherein said five degrees of freedom include flexion-extension, varus-valgus, proximal-distal, medial-lateral, and anterior-posterior.

65. (withdrawn) The apparatus according to claim 62 wherein said anchoring means is a pin.

66. (withdrawn) The apparatus according to claim 62 wherein said five degrees of freedom include two rotations and one translation.

67. (withdrawn) The apparatus according to claim 62 wherein said computer navigation system further comprises a tracker, and said guide includes means for attaching said tracker.

68. (withdrawn) The apparatus according to claim 62 further comprising a guide bushing defining two spaced apart guide holes, said guide bushing having an orthogonal stem for coupling to an alignment device and a coupling for coupling a tracker to the bushing.

69. (withdrawn) The apparatus of claim 62 wherein said anchoring means is oriented substantially parallel to the sagittal plane.

70. (currently amended) A set of tools for guiding the resection of a bone during arthroplasty, said set of tools comprising:

~~a guide bushing defining two spaced apart guide holes, said guide bushing having an orthogonal stem for coupling to an alignment device and a coupling for coupling a tracker to the bushing; and~~

an alignment device comprising:

— a first cam lock having a rod member at a first end and a split bore at a second end for slidably and rotationally receiving a pin extending into a bone, a diameter of the split bore being reduced by actuation of a first cam lever forming part of the first cam lock;

a split tubular member having a bore, a second cam lock located at a first end of the split tubular member, the rod member slidably and rotationally received within the bore at a first end of the split tubular member, a diameter of the split tubular member bore reduced by the actuation of a second cam lever forming part of the second cam lock;

the guide bushing orthogonal stem slidably and rotationally received within a bore at a second end of the split tubular member; and

a third cam lock located at the second end of the split tubular member, a diameter of the split tubular member bore at the second end reduced by the actuation of a third cam lever forming part of the third cam lock~~an alignment device having five degrees of freedom, said alignment device being adapted to couple to said stem and couple to an anchoring device.~~

71. (previously presented) The set of tools according to claim 70 wherein said guide is adapted to guide the drilling of holes in the distal femur.

72. (currently amended) The set of tools according to claim 70 wherein said guide is a guide bushing which includes a medial guide bushing and a lateral guide bushing, said medial guide bushing defining two spaced apart holes for drilling into the medial epicondylar region, and said lateral guide bushing defining two spaced apart holes for drilling into the lateral epicondylar region.